

Amendments to the Claims

This listing of claims will replace all prior revisions and listings of claims in this application.

Listing of Claims

1 1. (Currently Amended) A method of estimating a pose of a human head in natural scenes
2 comprising the steps of:

3 generating, a sparse representation of a human face by transforming a raw facial
4 image into sets of vectors representing fits of the face comprising fits of whole facial
5 features that represent the geometry (position, size and orientation) of the features, to a
6 random, sparse set of model configurations; wherein the sparse representation is a
7 collection of projections to a number of randomly generated possible configurations of
8 the human face;

9 training, the sparse representation to a set of face(s) in known poses; and

10 determining, a pose of a head by comparing the trained representation(s) to a
11 facial image.

1 2. (Cancelled)

1 3. (Previously Presented) The method according to claim 1 wherein the transforming step
2 further comprises the step of:

3 collecting, salient features of the face image which are useful to estimate the pose
4 of the face.

1 4. (Original) The method according to claim 3 wherein the transforming step further
2 comprises the step of:

3 suppressing, irrelevant variations of face appearance.

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- 1 5. (Original) The method according to claim 4 wherein the training step further comprises
 - 2 the steps of:
 - 3 learning, using Support Vector Regression (SVR), a relation between the sparse
 - 4 representation and the pose(s).
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- 1 6. (Withdrawn)